SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution
Coimbatore – 35

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A+ Grade
Approved by AICTE , New Delhi and Affiliated to Anna University , Chennai.

DEPARTMENT OF AGRICULTURE ENGINEERING

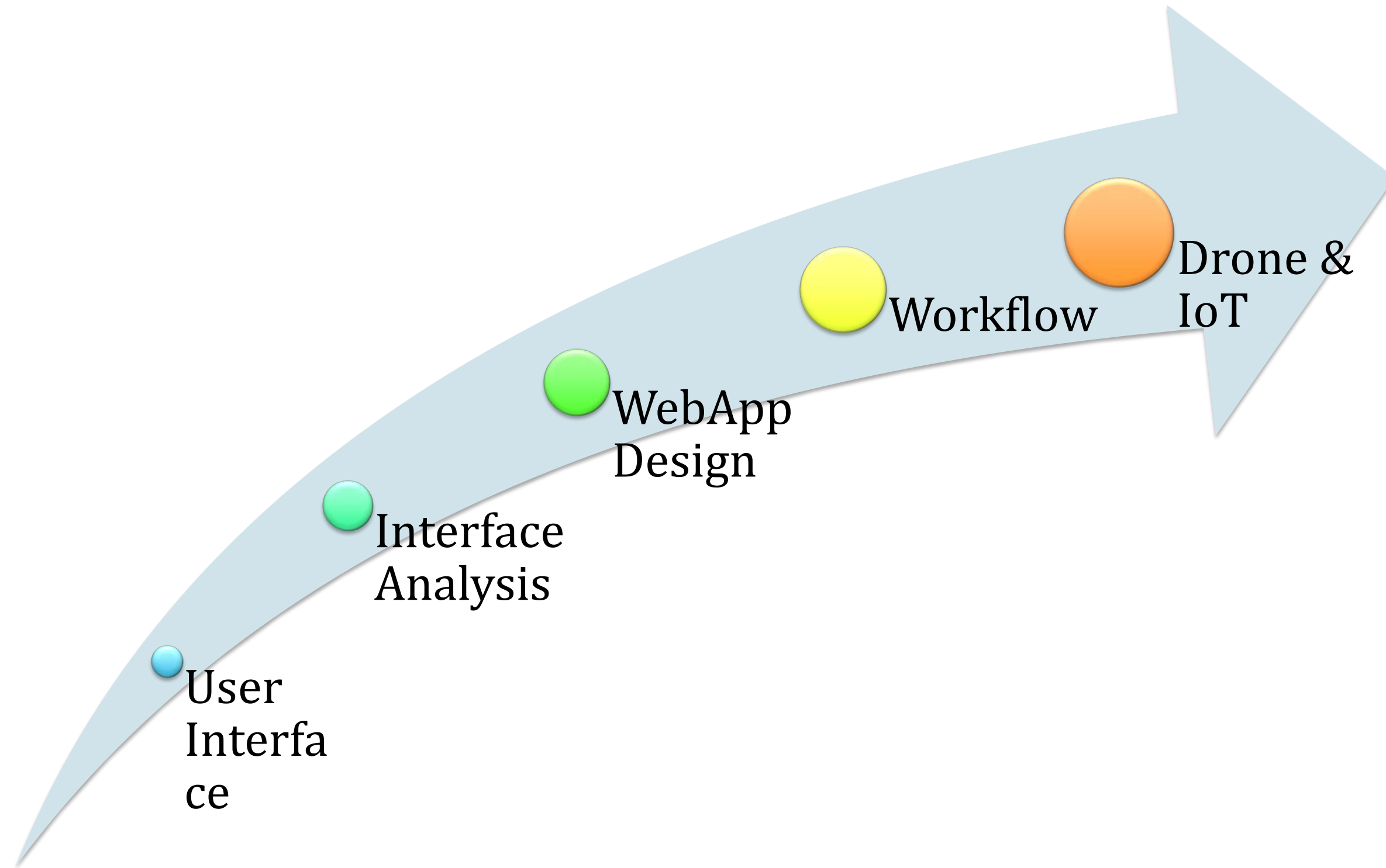## 19AGT203 – AUTOMATION TECHNIQUES IN AGRICULTURE ENGINEERING

II – YEAR IV SEMESTER

UNIT 5 – DRONE AND IoT IN AGRICULTURE

TOPIC 2 - CROP YIELD ESTIMATES, THREAT IDENTIFICATION

Last Class Review

Drone & IoT

Workflow

WebApp Design

Interface Analysis

User Interface

Crop Yield Estimation!!!

❖ To estimate crop yield, producers usually count the amount of a given crop harvested in a sample area. Then the harvested crop is weighed, and the crop yield of the entire field is extrapolated from the sample.

How is crop yield prediction done?

❖ The prediction of crop yield is based on soil, meteorological, environmental, and crop parameters. Decision support models are broadly used to extract significant crop features for prediction.
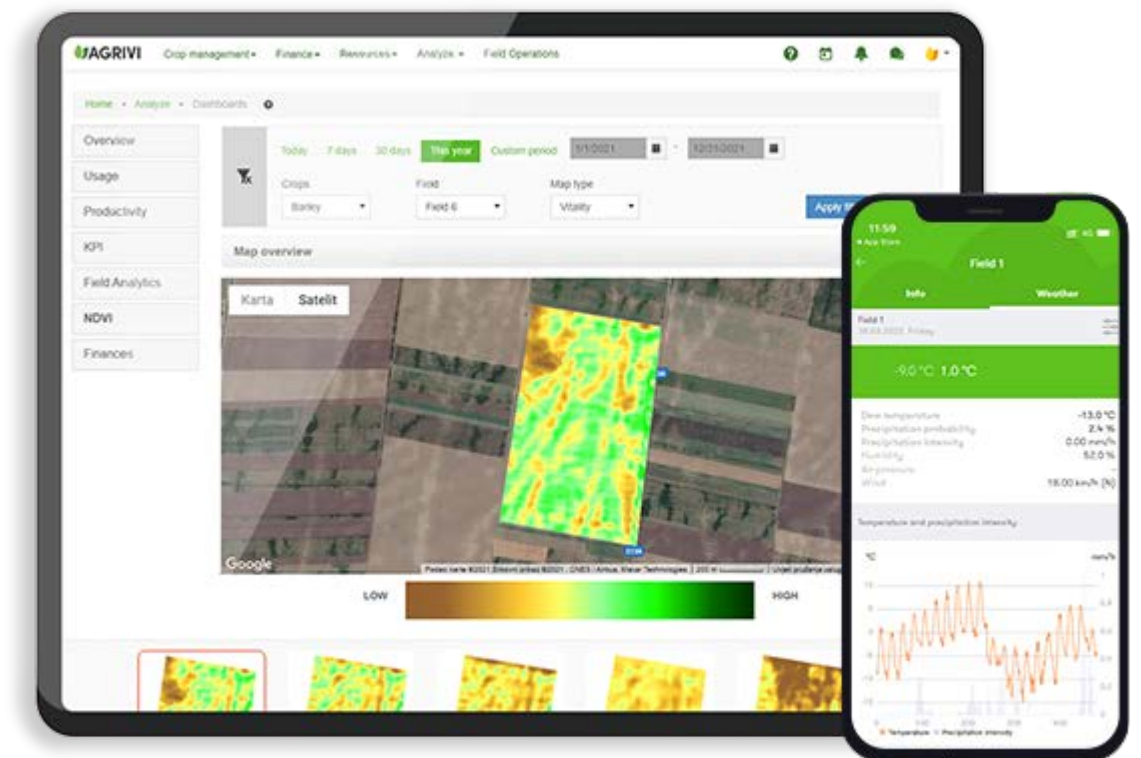
CROP YIELD ESTIMATES, THREAT IDENTIFICATION /19AGT203 – AUTOMATION TECHNIQUES IN AGRICULTURE ENGINEERING/ Ms.R.MUTHUMINAL , AP/AGRI/SNSCT

Why is yield estimation important?

❖ This is because crop yield can then inform import/export decisions as well as price structure, crop distribution, and future crop planning. Researchers have developed different ways to track and predict crop yield, including vegetation indices and statistical models.

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What is the unit of yield?

- Yield is a measure of a film's coverage per unit of weight; yield values are expressed as in2/lb in US standard and m2/kg in metric (or SI) units. Unit weight is the reciprocal of yield and is presented in units of lb/ream or g/m2.

Formula for yield analysis?

❖ The dividend yield ratio is calculated using the following formula: Dividend Yield Ratio = Dividend Per Share/Market Value Per Share. In the simplest form of calculation, you can take the amount of dividend per share and divide it with the market value per share to get the dividend yield ratio.

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Aim of crop yield prediction….

❖ Crop yield prediction is an essential task for the decision-makers at national and regional levels (e.g., the EU level) for rapid decision-making. An accurate crop yield prediction model can help farmers to decide on what to grow and when to grow. There are different approaches to crop yield prediction.

Parameters!!!

❖ These parameters are temperature, rainfall, location of soil, relative humidity and area. These are the features with the help of which the dataset is analyzed and the better yield is predicted.

Steps in Crop yield estimates

- Select an area that is representative of the paddock. ...
- Do this 5 times to get an average of the crop (A)
- Count the number of grains in at least 20 heads or pods and average (B)
- Using Table 1 determine the grain weight for the crop concerned (C)
- Yield in t/ha = (A × B × C) / 10,000.

See You at Next Class!!!!

5/29/2023

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